



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------------|---------------------------|------------------|
| 10/824,217 | 04/14/2004 | Christopher John Stephenson | 020569-03403/P202-1230B-U | 6286 |

71762 7590 10/09/2007
JONES & SMITH, LLP
2777 ALLEN PARKWAY
SUITE 800
HOUSTON, TX 77019

| |
|----------|
| EXAMINER |
|----------|

FEELY, MICHAEL J

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1796

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,217

Applicant(s)

STEPHENSON ET AL.

Examiner

Michael J. Feely

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 106-110, 112, 114-116, 119, 121-131, 135-140, 142, 144, 145, 150-154 and 160-180 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>20070611</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1712

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely
Primary Examiner
Art Unit 1712

October 1, 2007

MICHAEL FEELY
PRIMARY EXAMINER

Continuation of Disposition of Claims: Claims pending in the application are 106-110,112,114-116,119,121-131,135-140,142,144,145,150-154 and 160-180.

DETAILED ACTION

Pending Claims

Claims 106-110, 112, 114-116, 119, 121-131, 135-140, 142, 144, 145, 150-154 and 160-180 are pending.

Response to Amendment

1. The rejection of claims 134-152 and 154 under 35 U.S.C. 102(b) as being anticipated by Gibb (4923714) has been overcome by amendment.
2. The rejection of claims 106-110, 116, 117, 119, 122, 123-131, 133-136, 141-145, 149-156 and 159 under 35 U.S.C. 102(e) as being anticipated by Gunner (2006/0127363) has been overcome by amendment.
3. The rejection of claims 106-110, 114-117, 119, 123-125, 127, 128, 130, 131, 133-136, 141-145, 149, 150, 152, 154, 155, 156 and 159 under 35 U.S.C. 102(e) as being anticipated by Garg (6929199) has been overcome by amendment.
4. The rejection of claims 106-110, 114-116, 119, 123-125, 127, 130, 131, 133-136, 141, 142, 144, 145, 149-152 and 154 under 35 U.S.C. 102(b) as being anticipated by Sweet (5188175) has been overcome by amendment.
5. The rejection of claims 106-110, 114-116, 119, 130, 131, 133-135, 141, 142, 144, 145 and 149 under 35 U.S.C. 102(b) based upon a public use or sale of the invention, has been overcome by amendment.
6. The rejection of claims 141, 150 and 153 rejected under 35 U.S.C. 103(a) as being unpatentable over Gibb (4923714) has been overcome by amendment.

Art Unit: 1712

7. The indicated allowability of claims 111-113, 118, 120, 132, 157, 158 and 160 is withdrawn in view of the newly discovered reference(s) to Rickards et al. (US Pat. No. 6,059,034). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 106-110, 112, 114-116, 119, 121-131, 135-140, 142, 144, 145, 150-154, 160, and 169-180 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rickards et al. (US Pat. No. 6,059,034).

Regarding claims 106-110, 112, 116, 119, and 123-129, Rickards et al. satisfy all of the material/chemical limitations of the instantly claimed *selectively configured porous particulate material comprising a porous particulate material treated with a liquid resin, plastic, cement, sealant, or binder, wherein the porous particulate material has inherent or induced permeability and is selected from the group consisting of porous ceramics, polyolefins, styrene-divinylbenzene*

Art Unit: 1712

copolymers, and polyalkylacrylate esters (column 16, line 19 through column 21, line 63; *particularly* column 17, line 50 through column 18, line 35; Figures 27-30).

They fail to disclose the instantly claimed properties; however all chemical/material limitations have been satisfied. In light of this, it has been found that, “Products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that Rickards et al. would have inherently taught all of the instantly claimed properties.

Regarding claims 130, 131, 135, and 136, Rickards et al. satisfy all of the material/chemical limitations of the instantly claimed *selectively configured porous particulate material comprising a porous particulate material coated or penetrated with a liquid resin, plastic, cement, sealant, or binder, wherein the porous particulate material has inherent or induced permeability and is selected from the group consisting of porous ceramics, polyolefins, styrene-divinylbenzene copolymers, and polyalkylacrylate esters* (column 16, line 19 through column 21, line 63; *particularly* column 17, line 50 through column 18, line 35; Figures 27-30).

They fail to disclose the instantly claimed properties; however all chemical/material limitations have been satisfied. In light of this, it has been found that, “Products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure,

Art Unit: 1712

the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that Rickards et al. would have inherently taught all of the instantly claimed properties.

Regarding claims 137-140, Rickards et al. inherently satisfy the material/chemical limitations of the instantly claimed *selectively configured porous particulate material comprising a porous particulate material having inherent or induced permeability which is treated or modified with a glazing material* (column 16, line 19 through column 21, line 63; particularly column 17, line 50 through column 18, line 35; Figures 27-30). Any of these deformable material layers would have inherently satisfied *a glazing material*.

Furthermore, they fail to disclose the instantly claimed properties; however all chemical/material limitations have been satisfied. In light of this, it has been found that, “Products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that Rickards et al. would have inherently taught all of the instantly claimed properties.

Regarding claims 114, 115, 121, 122, 160, and 169-179, Rickards et al. satisfy all the material/chemical limitations if the instantly claimed *selectively configured porous particulate*

Art Unit: 1712

material comprising a porous particulate material having inherent or induced permeability and which is selected from the group consisting of porous ceramics, polyolefins, styrene-divinylbenzene copolymers, and polyalkylacrylate esters, and further when the selectively configured porous particulate material comprises a multitude of the porous particulate material bonded together (column 16, line 19 through column 21, line 63; particularly column 17, line 50 through column 18, line 35; Figures 27-30).

They fail to disclose the instantly claimed properties; however all chemical/material limitations have been satisfied. In light of this, it has been found that, “Products of identical chemical composition can not have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that Rickards et al. would have inherently taught all of the instantly claimed properties.

Regarding claims 142, 144, 145, 150-154, and 180, Rickards et al. satisfy all of the material/chemical limitations of the instantly claimed *selectively configured porous particulate material comprising a porous particulate having inherent or induced permeability and treated with nylon, polyethylene, polystyrene or a mixture thereof, wherein the porous particulate material is selected from the group consisting of porous ceramics, polyolefins, styrene-divinylbenzene copolymers, and polyalkylacrylate esters (column 16, line 19 through column 21, line 63; particularly column 17, line 50 through column 18, line 35; Figures 27-30).*

Art Unit: 1712

They fail to disclose the instantly claimed properties; however all chemical/material limitations have been satisfied. In light of this, it has been found that, "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that Rickards et al. would have inherently taught all of the instantly claimed properties.

Claim Rejections - 35 USC § 103

11. Claims 161-168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rickards et al. (US Pat. No. 6,059,034).

Regarding claims 161-168, the teachings of Rickards et al. are as set forth above and incorporated herein. They fail to disclose the claimed coating thickness of about 1 to about 5 microns. Rather, they disclose, "A deformable layer or coating around a substantially non-deformable particle core may be *any thickness suitable* for allowing deformation of the layer upon contact with fracture proppant materials under closure stress. However, typically thickness of such layer/s are limited such that deformation under anticipated formation closure stress does not result in damage to conductivity due to excessive deformation and impingement into fracture proppant pack pore spaces. In this regard, a layer/s of deformable material typically is thick enough to provide a coating sufficient for reducing proppant flowback and/or fines generation by

Art Unit: 1712

allowing adjacent relatively hard fracture proppant material to embed in the layers of deformable material without substantially reducing porosity or conductivity of the proppant pack.

In light of this, it has been found that, “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation,” – *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); and “A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation,” – *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a coating thickness of about 1 to about 5 microns in Rickards et al. because they demonstrate that this thickness is a result effective variable, wherein any suitable thickness can be used.

Art Unit: 1712

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 106-110, 112, 114-116, 119, 121-131, 135-140, 142, 144, 145, 150-154 and 160-180 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 97 of U.S. Patent No. 6,059,034, in light of the specification. Although the conflicting claims are not identical, they are not patentably distinct from each other because: the patented claim with components, as defined in the specification (column 16, line 19 through column 21, line 63; *particularly* column 17, line 50 through column 18, line 35; Figures 27-30), would have inherently or obviously satisfied the instant invention – See: *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970); MPEP 804, II, B, 1.